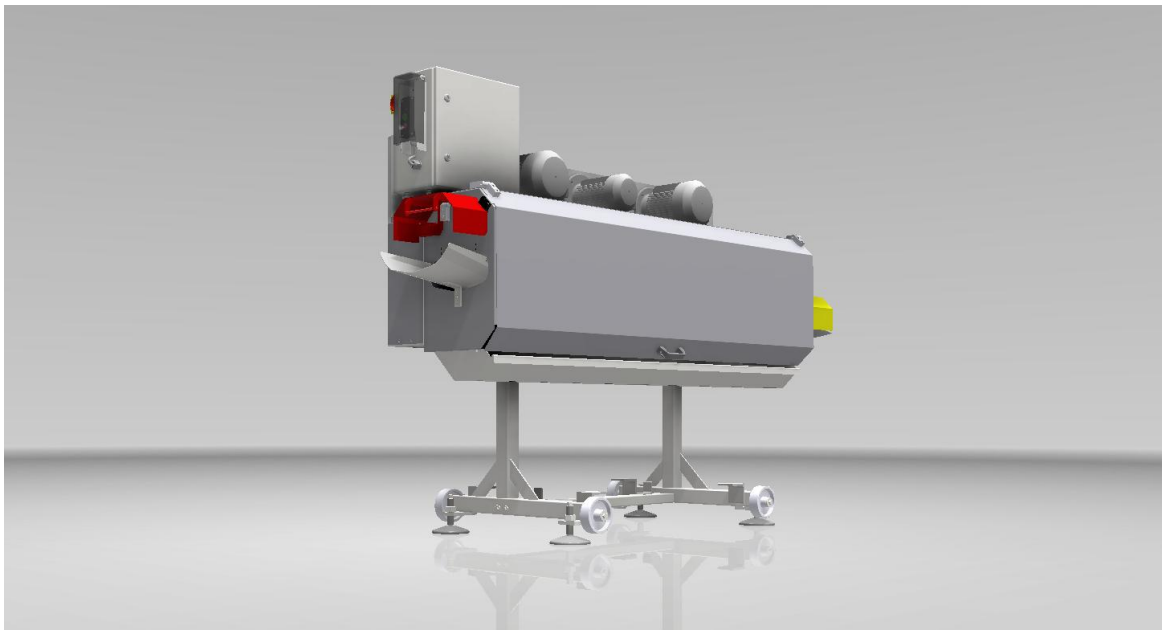
BAADER ÍSLAND ehf

Operating, Maintenance And Service Manual
Spare Parts List
IS-Descaler



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Preface

This manual is dedicated to the personnel responsible for the operation, maintenance and service of a Baader IS-Descaler.

Carefully read the instructions and safety precautions given in this manual. Do not attempt to operate maintain or service this machine until you have thoroughly read and understood the information contained in this manual.

It is the responsibility of the owner to ensure training is given to all personnel involved on the operation of these machines.

Baader Ísland ehf. Will not assume any liability for damages due to the non-observance of this manual, inadequately trained personnel, improper handling of the machine nor its application in fields other than those specified in this manual.

In case of arbitrary modifications by removing or mounting parts or any modification of the machine without our written approval, our conformity declaration (EC directive) will become invalid.

Use only Baader genuine spare parts.

It is imperative to comply with the legal safety regulations for food processing machinery which are in force in your country.

This manual is the intellectual property of Baader Ísland ehf and may not be copied, reproduced nor made available to third parties without our prior written approval.

Warning To clearly show details of this machine, covers, guards, barriers or doors may have been removed or shown in an open position. All such safety components must be replaced prior to the machine being used. Failure to observe this instruction may result in serious personal injury or death.

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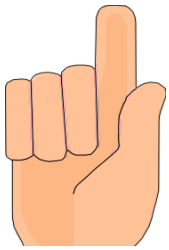
Pictograms used in this manual



Important Note

Caution In case of non-compliance, damage of the machine and or property cannot be ruled out.

Particular attention required:–
Danger of personal injury.

Danger
Unprotected electrical systems.

SAFETY PRECAUTIONS

IMPORTANT INFORMATION FOR MACHINE OPERATORS

Non-specified use, as well as improper operation of the machine, can result in serious bodily harm and severe material damage. Operators must observe the following safety instructions:

Read the operating instructions prior to starting up the machine.

Unauthorised personnel must not operate, maintain or service the machine.

Wear close fitting work clothing, especially around the arm.

Remove all jewellery – rings, watches, necklaces.

Do not reach into a running machine.

Do not place loose articles on the machine.

Do not run the machine unattended.

In the event of failure of the functional sequence, prior to cleaning, maintenance and lubrication:

Switch off the machine.
Put the machine switch to 0 position and secure it.

Only qualified personnel should maintain or service the machine, strictly observing these operating instructions.

The safety devices installed by the manufacturer must not be by-passed, modified or removed!

Spraying in electrical enclosures and the area of the control gear is prohibited; this action presents an explosion hazard.

Never operate maintain or service this machine if under the influence of alcohol or other substances that may impair alertness or judgement e.g. prescription drugs.

Use safety protective equipment provided.

SAFETY INSTRUCTION

Prior to starting up the machine:

Ensure all machine covers are fitted.

Verify the correct functionality of all safety devices.

During operation, the machine should stop ...
... when setting the main switch (fig. 1, item 1) of the descaling machine to position 0.
... when pressing the cover over the buttons or the red button directly (fig. 1, item 2).
... when actuating the safety lever (fig. 1, item 3) in front of the in feeding section.
... when opening the guard (fig. 1, item 4).

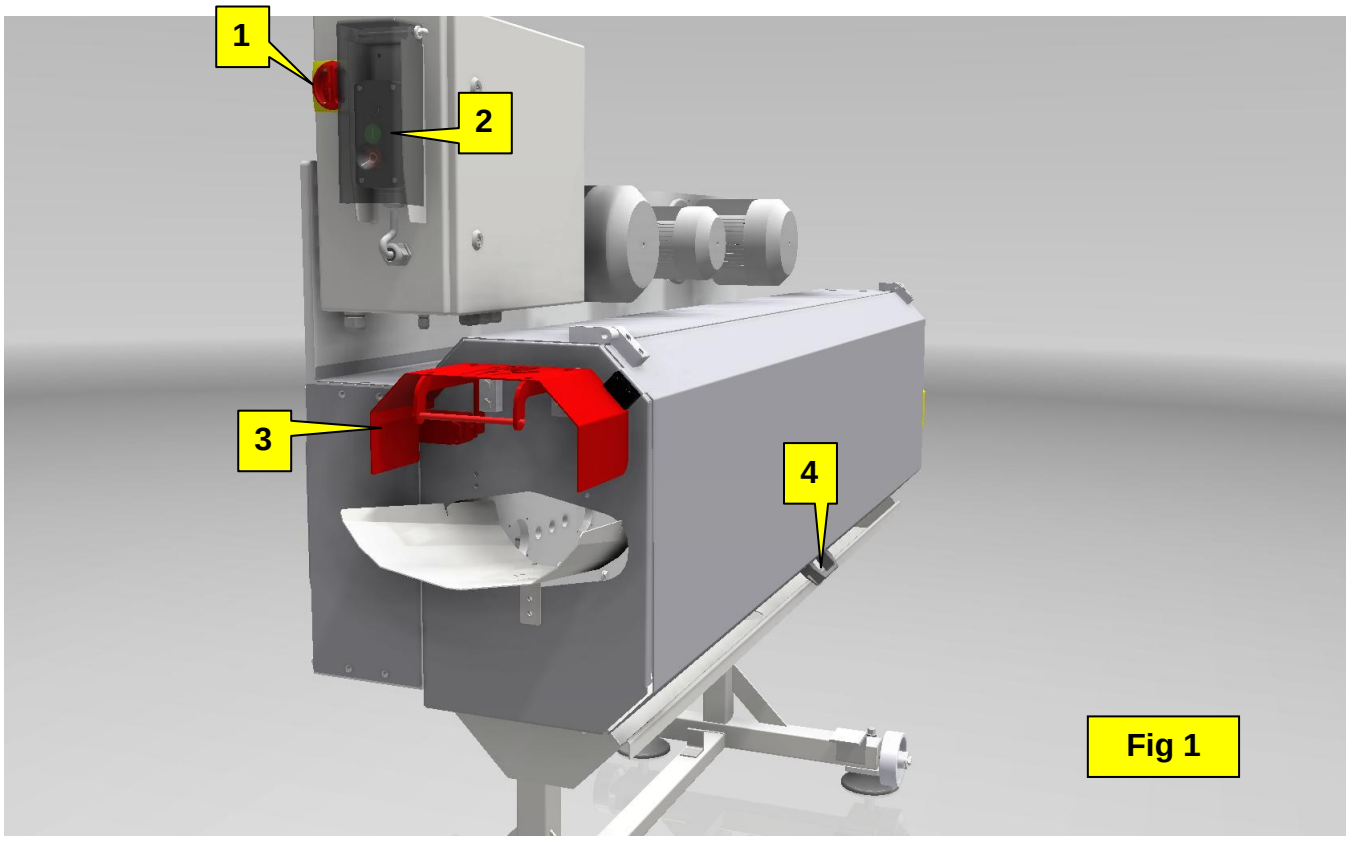
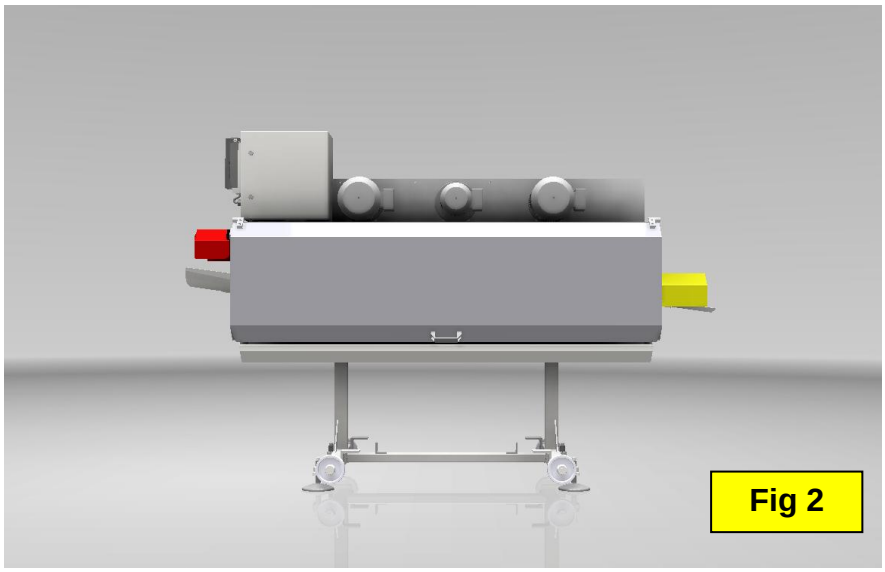


Fig 1

General



The machine is designed to remove the scales of whole fish.

Note: Live fish and fish in the state of rigor mortis cannot be processed.

Machine Applications and Features:

The fish is placed head first on its side into the machine. The fish is transported to the exit while the scales are removed.

Technical Data: 069

Fish Species		**: Ocean Perch, Haddock or similar**
Process Condition		**: Whole or gutted fish.**
Size range		**: 0,4 – 3kg**
Throughput rate		**: 33 – 100 fish per min**
Power Consumption		**: 2,5 kW**
Water supply	**- Consumption** **- Pressure** **- Connection**	**: 12,5 l/min at 2 bar 20 l/min at 5 bar** **: 2 to 5 bar (30 to 75 psi)** **: 1/2" – Hose**
Dimensions	**- Length** **- Width** **- Height**	**: 1803 mm** **: 590 mm** **: 1596 mm**
Weight		**: 280 kg**
Operator requirements		**: 1 person**
Noise measurement (evaluation according to DIN 45635) Workplace level (LpAeq)		**: 82dB(A) – Wear Ear Protection.**

The machine is configured for the above mentioned size range and throughput rate. However, the proportions and the quality of the fish (season, fishing ground, degree of freshness etc.) have an influence on the figures indicated, and these may vary in practice.

NOTE: Live fish and fish in the state of rigor mortis cannot be processed.

Technical Data: 692

Fish Species		**: Haddock or similar**
Process Condition		**: Whole or gutted fish.**
Size range		**: 1 – 8kg**
Throughput rate		**: 25 – 50 fish per min**
Power Consumption		**: 4 kW**
Water supply	**- Consumption** **- Pressure** **- Connection**	**: 12,5 l/min at 2 bar 20 l/min at 5 bar** **: 2 to 5 bar (30 to 75 psi)** **: 1/2" – Hose**
Dimensions	**- Length** **- Width** **- Height**	**: 2323 mm** **: 690 mm** **: 1630 mm**
Weight		**: 365 kg**
Operator requirements		**: 1 person**
Noise measurement (evaluation according to DIN 45635) Workplace level (LpAeq)		**: 82dB(A) – Wear Ear Protection.**

The machine is configured for the above mentioned size range and throughput rate. However, the proportions and the quality of the fish (season, fishing ground, degree of freshness etc.) have an influence on the figures indicated, and these may vary in practice.

NOTE: Live fish and fish in the state of rigor mortis cannot be processed.

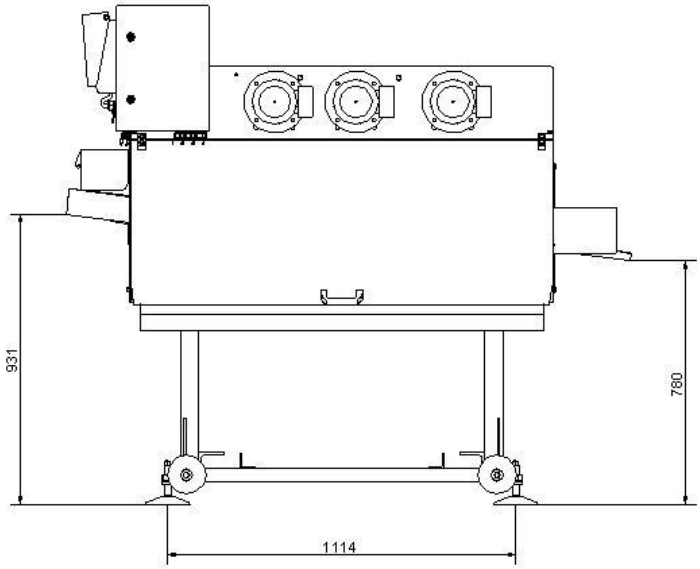
Technical Data: 693

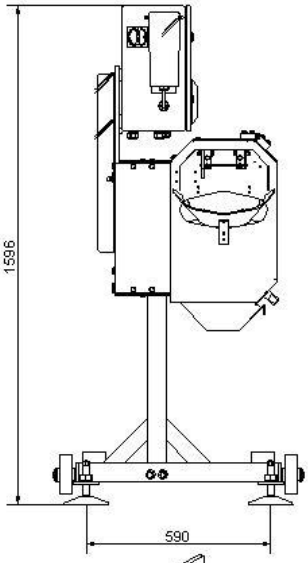
Fish Species		**: Salmon or similar**
Process Condition		**: Whole or gutted fish.**
Size range		**: 1 – 7kg**
Throughput rate		**: 25 – 50 fish per min**
Power Consumption		**: 4 kW**
Water supply	**- Consumption** **- Pressure** **- Connection**	**: 12,5 l/min at 2 bar 20 l/min at 5 bar** **: 2 to 5 bar (30 to 75 psi)** **: 1/2" – Hose**
Dimensions	**- Length** **- Width** **- Height**	**: 2323 mm** **: 690 mm** **: 1630 mm**
Weight		**: 365 kg**
Operator requirements		**: 1 person**
Noise measurement (evaluation according to DIN 45635) Workplace level (LpAeq)		**: 82dB(A) – Wear Ear Protection.**

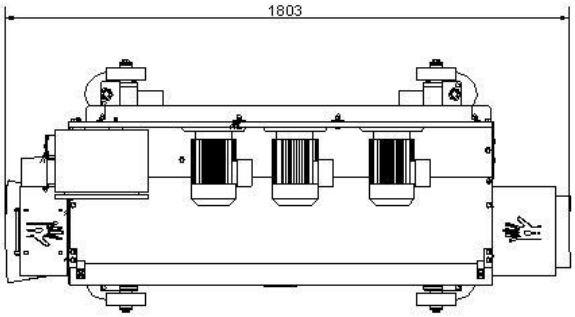
The machine is configured for the above mentioned size range and throughput rate. However, the proportions and the quality of the fish (season, fishing ground, degree of freshness etc.) have an influence on the figures indicated, and these may vary in practice.

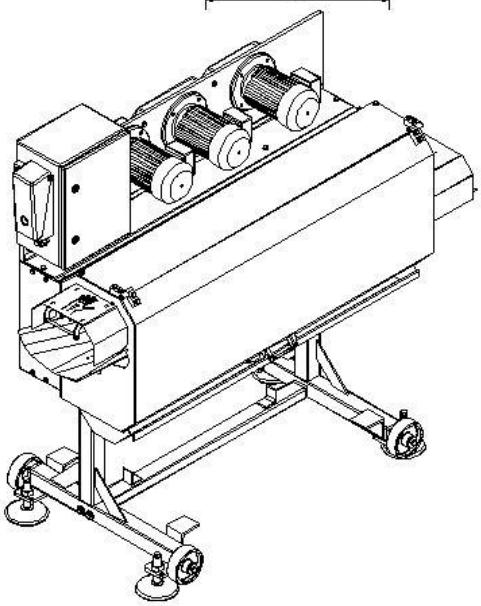
NOTE: Live fish and fish in the state of rigor mortis cannot be processed.

Dimensions IS-069

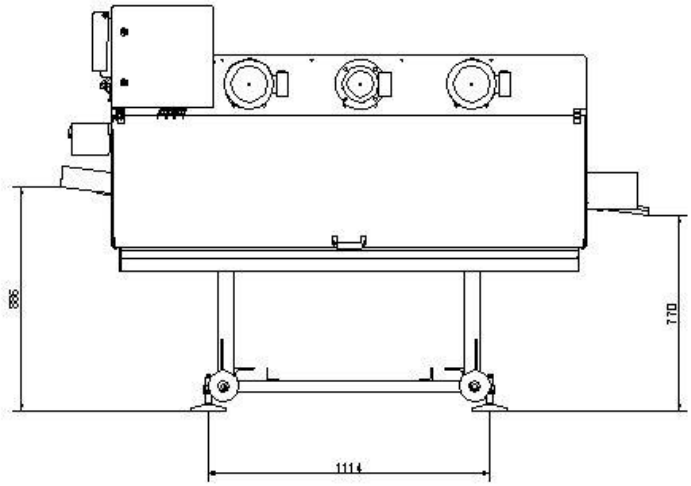


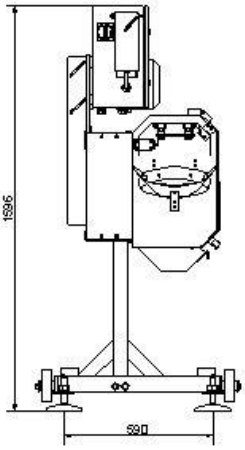


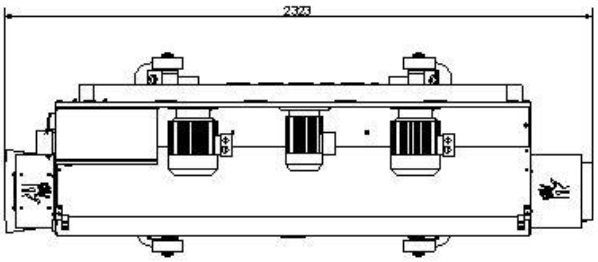


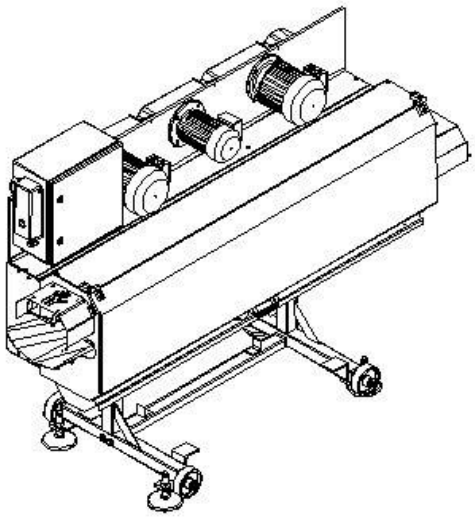


Dimensions IS-692 / IS-693









Employees who are responsible for safe working practices have to ensure that :-

Any maintenance or service work is only completed by qualified personnel.
Operating instructions and information required for procedures completed by operators to be available at all times.
Operators must strictly observe the contents of this information.
Improper operation or insufficient maintenance can result in serious personal injury and severe material damage.

Machine Set-up

The machine must be readily accessible from all sides, for ease of operation and maintenance.

Place the machine on the base plates (fig.3 item 1), using the adjusting spindles (fig.3 item 2) level and adjust the working height of the machine. When complete lock the adjusting spindles using the lock nut (fig.3 item 3). Wheels can be left on or removed (fig.3 item 4).

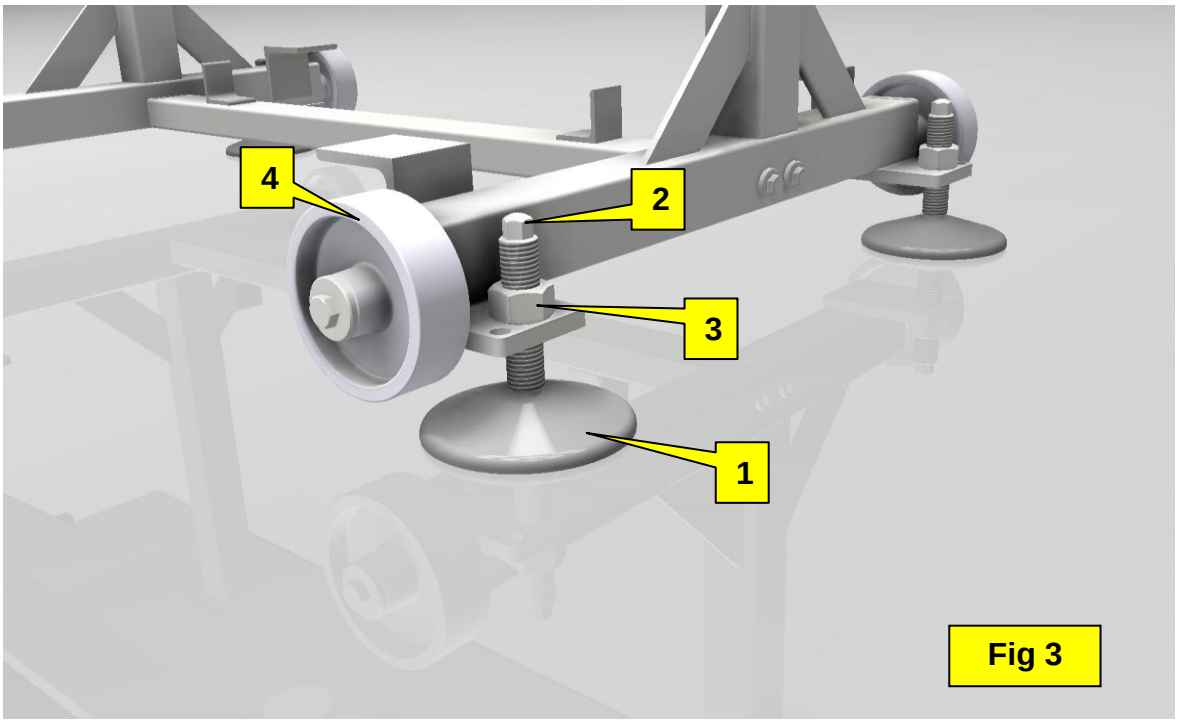


Fig 3

Power Connection

The machine is supplied with approximately 5m of Ölflex 191 5 G 2.5 cable terminating in a type 416P6 plug which is IP44 splash-proof and conforms to IEC 60 309-2.

To comply with the legal safety regulations, the machine has to be connected to the mains electrical supply in accordance with the circuit diagram taking into account the regulations of the local electrical authorities and the rules EN 60204 and VDE 0100.

Seal the cable bushes and screw so they are watertight.

An electrician must read and understand the electrical drawings supplied with the machine before connecting to the electrical supply. After connecting the machine the electrician should test the electrical equipment is functioning correctly and ensure the machine is properly grounded. It is important to verify the correct rotation of the electrical motors. Ensure that all exposed electrical equipment is properly covered. Seal the cable bushes and tighten to make watertight. The doors of the cabinet must be closed after the completion of the electrical connection.

Always lock the main electrical switch in the OFF position prior to performing any maintenance or service work.

Do Not by-pass or circumvent any safety equipment.

Removal of any cover or guard is prohibited.

Prior to working on the machine switch the main electrical switch to the 0 position and lock it. Failure to comply may result in serious personal injury or death.

Main working parts

It is important to check the direction of rotation of the descaling heads

If the roation is in the wrong direction it is not possible to insert fish as the transport wheels turn in the wrong direction.

IS-069 is equipped with only one 30°/45°descaling heads instead of two.

Picture is of IS-693

Pressure plate adjuster **Transport wheels** **30°/45°descaling heads**

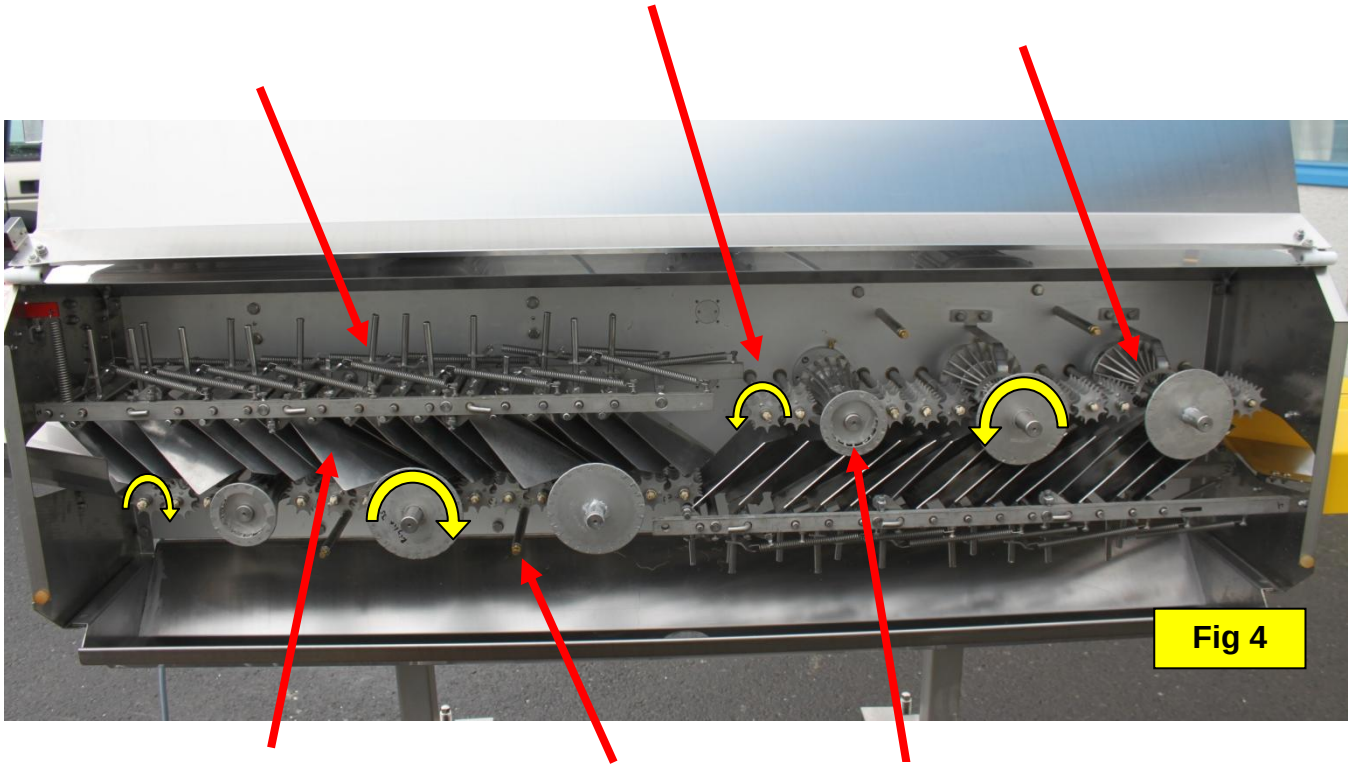


Fig 4

Pressure plate **Water nozzle** **15°descaling heads**

Water Connection

The water connection (fig.5 item 1) is configured for 1/2" hose.

The hose should be led from the top down to the machine and secured to the hose tail by means of a hose clip.

Water pressure should be between
2 to 5 bar (30 to 75 psi)

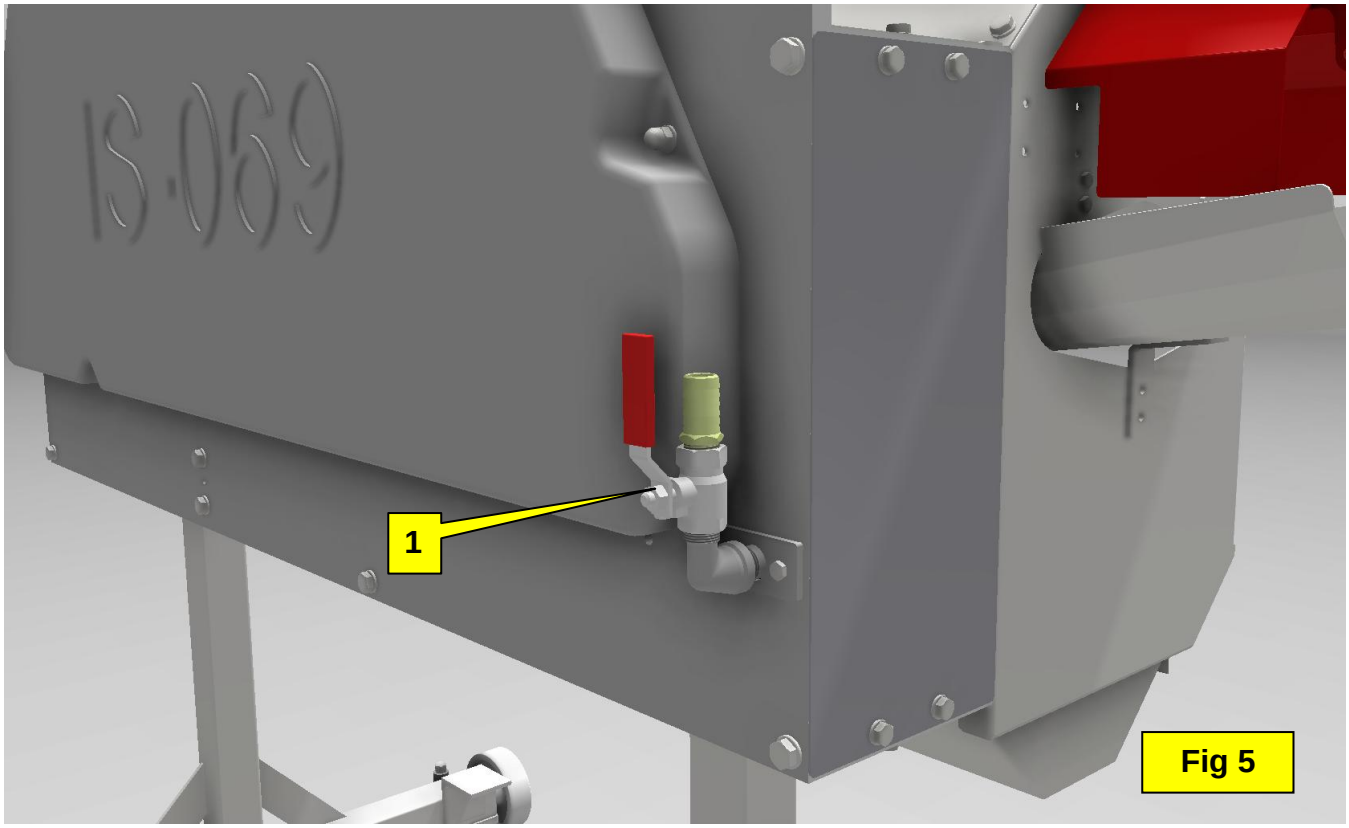


Fig 5

Initial Start-up Procedure

Prior to starting the machine, remove the preservative from all areas in contact with the product.

Wash the machine from bottom to top using a low pressure wash (max 30 bar) with drinking water heated to 60°C.

After cleaning, run the machine briefly; grease to remove any cleaning fluid that may have penetrated the bearings.

Using the machine

Turn on the water and start the machine by lifting the clear plastic cover and pushing the green start bottom (fig. 6, item 1) located on the side of the electrical cabinet. Feed the fish on its side, head first into the machine (fig. 6, item 2).
Stop the machine by pressing the clear plastic cover over the ON and OFF switch.

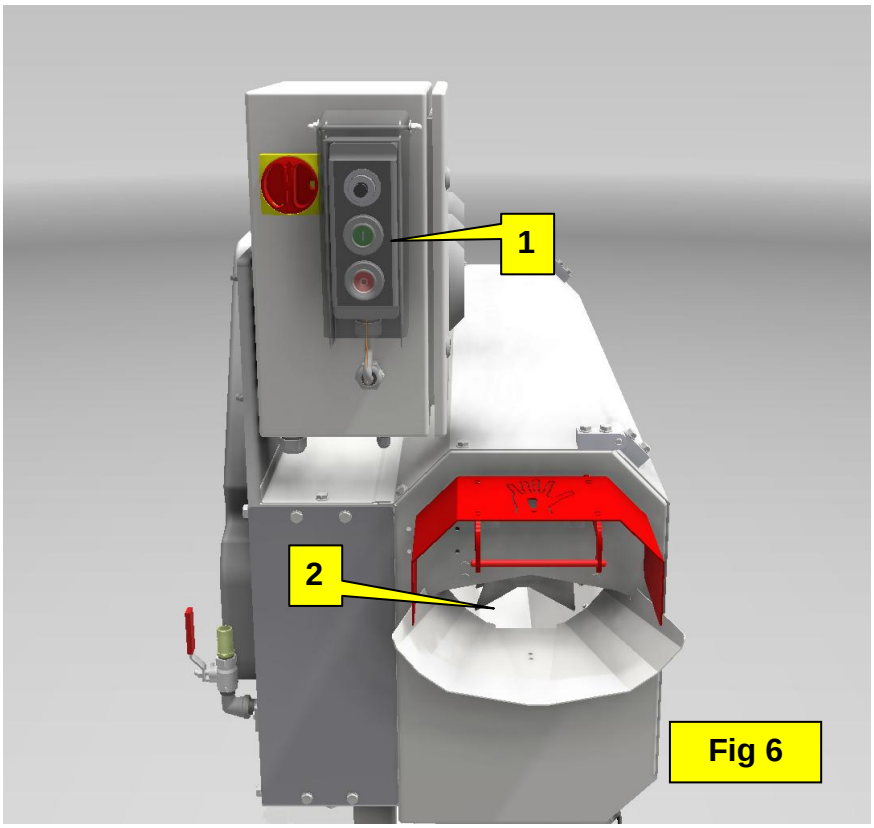


Fig 6

Cleaning

Clean the complete machine at regular intervals (8 operating hours).
When using low-pressure cleaning devices, do not direct the jet into bearings.

Rest periods.

Set the main switch to position 0.
Remove residual product and wash the machine from all sides with a powerful water jet.

Pre cleaning.

Start and clean the machine observing the appropriate safety distance from the moving machine parts:
with low pressure, max 30 bar.
with 60°C drinking water.
from bottom to top.

Keep the safety distance.
Make sure that clothing, hoses, cleaning devices do not get caught by the moving components of the machine; danger of serious bodily injury and damage to the machine.
Do not run the machine unattended.

Main cleaning

The main electrical switch shall be at the 0 position and lock it.
Observe the safety instructions at the beginning of this manual.
Wear protective clothing during cleaning and sanitation operations.
Observe the specific national regulations for the cleaning agents and disinfectants used.

Operation	Cleaning Agent	Device / Method	Remarks
Main Cleaning	2 – 5% P3-topax 17 *	Foam with low-pressure foaming device	From bottom to top reaction time 15 minutes
	For removing calcareous deposits, use 1 time per week cleaning foam 2 – 5% P3-topax 56 instead of P3-topax 17		From bottom to top reaction time 15 minutes
	Drinking water at 60°C	Rinse with low pressure, max 30 bar	Carefully from top to bottom
Check		Visual	
Sanitation	1% P3-topax 91	Low-pressure spraying, max 30 bar	From top to bottom, reaction time about 10 – 15 minutes since contingent upon germ spectrum; refer to product data sheet
Rinsing	Drinking water max 20°C	Low pressure, max. 30 bar	Rinse again carefully

*** To avoid white deposits, P3-topax 17 should not be foamed on hot surfaces.**

The cleaning agents P3-topax 17 and P3-topax 56 recommend the avoidance of painted areas of the machine due to the aggressive cleaning properties of the products.

After cleaning run the machine briefly and grease to remove any cleaning fluid that may have penetrated the bearings.

Correctly dispose of cleaning agents that are ecologically harmful.

Preservation

Prior to the machine not being used for long periods. Protect the machine using food approved preservatives.

Recommended preservatives:
Preservation spray MBF 370 – ref. no. 51.10.0201.(400 ml can)
Preservation liquid MBF 360 – ref. no. 51.10.0200 (5 l container)
These preservatives meet the requirements according to USDA-H1

Before resuming production, remove the preservative from all areas in contact with the product:

with low pressure, max 30 bar.
with 60°C drinking water.
from bottom to top.

Speed adjustment

The fish transfer speed is adjusted by turning the speed control button located under the clear plastic cover by the start stop controls (fig. 7, item 1)..

The speed of the descaling heads is fixed.

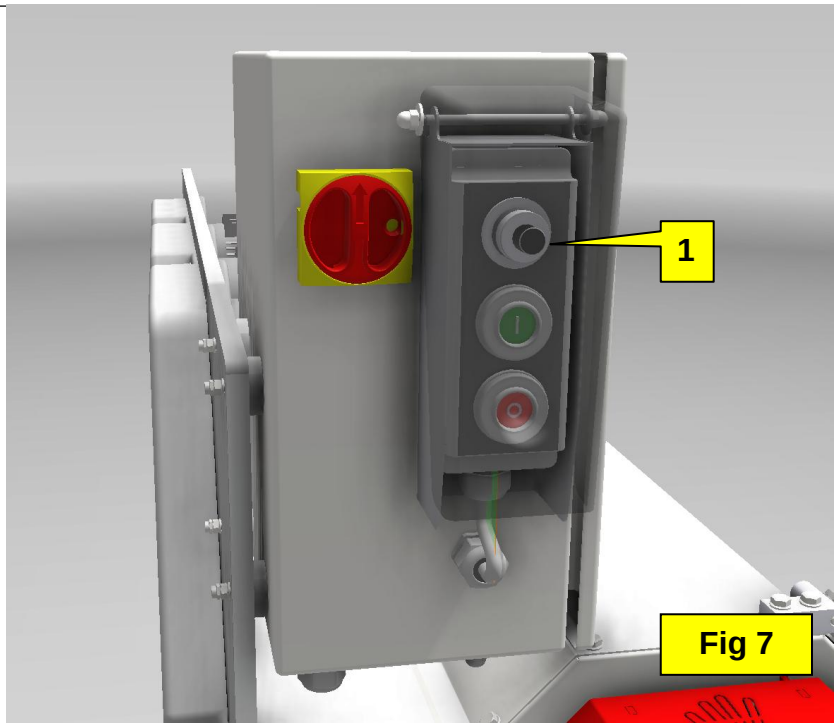


Fig 7

Adjustment of the 30°/45° descaling heads

Prior to working on the machine switch the main electrical switch to the 0 position and lock it. Failure to comply may result in serious personal injury or death.

The placement of the 30°/45° descaling heads is important for satisfactory descaling. To adjust the 30°/45° descaling head loosen the two screws (fig. 8, item 1) and slide the descaling head in the desired direction. Tighten the screws after adjustment. Take care that the screws lie on the flat area of the shaft (fig. 8, item 2).

For the best results, the descaling heads should be moved in small steps (5 mm), test the results each time by processing fish through the machine.

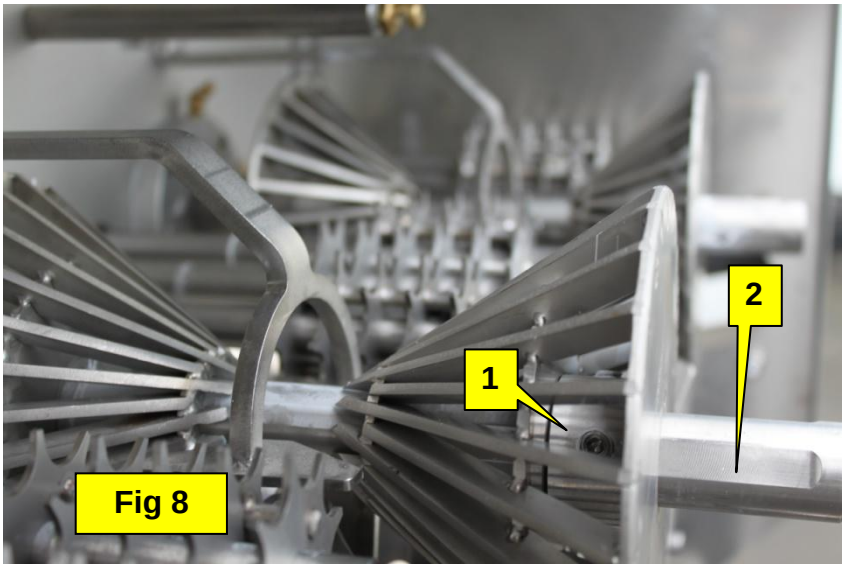
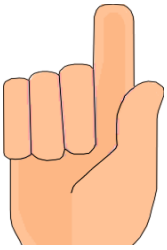
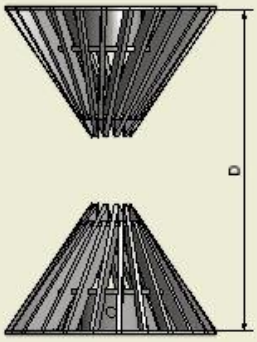


Fig 8



The 30°/45° descaling heads may not be closer together than the height of the fish (fig. 9).

Failure to follow this instruction will result in damage to the product.



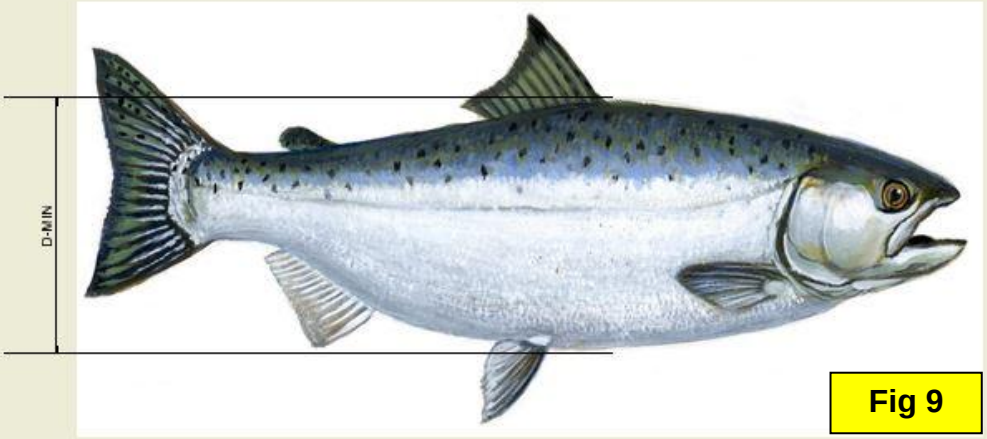


Fig 9

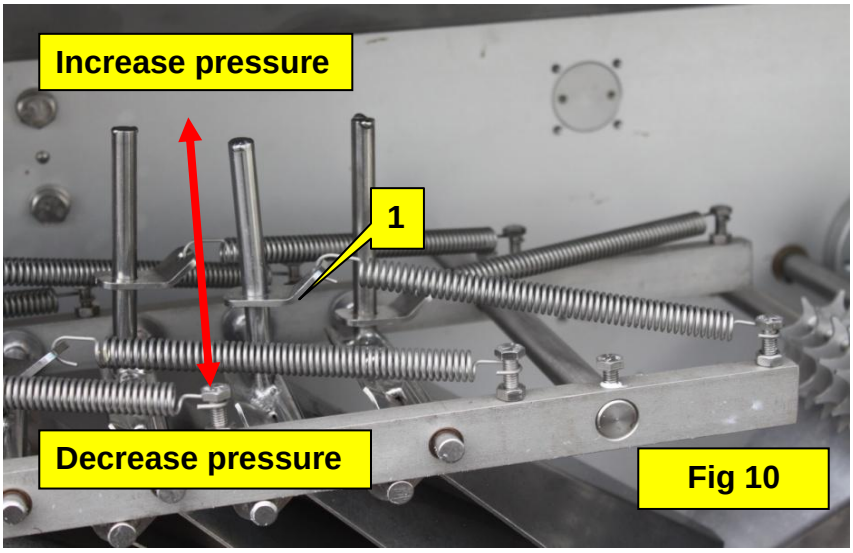
Adjustment of the pressure plates

Prior to working on the machine switch the main electrical switch to the 0 position and lock it. Failure to comply may result in serious personal injury or death.

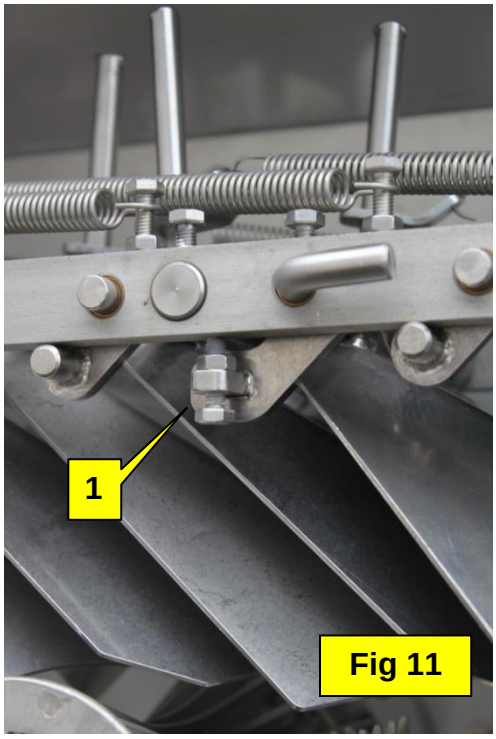
Pressure plates control the fish as they move through the machine.

Pressure is adjusted by moving the springs up or down on the levering pins (fig. 10, item 1).

Moving the springs to the end of the levering pins will increase the pressure.



The pressure plates that lie over the descaling heads need to be adjusted so they are approximately 5mm clear of the descaling head. This is achieved by turning the adjusting screw and locking in position after adjustment (fig. 11, item 1).



Starting production

Prior to working on the machine switch the main electrical switch to the 0 position and lock it. Failure to comply may result in serious personal injury or death.

Adjust the spring tension to minimum, (horizontal) position.

Place one fish, on its side, head first into the machine.

Examine the fish for damage and scale removal.

If scales remain, determine where (e.g. belly, back, tail or side).

The 30°/45° descaling heads remove the scales from the belly, back and tail. The 15° descaling heads remove the scales from the sides of the fish.

Tension on the pressure plates is controlled by the springs that incorporate a finger-tip adjusting system. All the pressure plates have a stop that prevents contact with any of the spiked drive rollers or descaling heads. The pressure plates have been factory set, but may require readjustment at installation. Every machine is pre-set and tested with fish prior to dispatch.

After determining where to increase spring pressure to remove any additional scales, do so gradually, process one fish after adjusting the machine. Never apply more spring pressure than is absolutely necessary, as it will cause unnecessary damage to the fish.

For the best results the 30°/45° descaling heads should be moved in small steps (5 mm), test the results each time by processing fish through the machine

When descaling fish of variable sizes and shape, the 30°/45° descaling heads can be moved closer together or further apart. Increase or decrease space between descaling heads in small steps (5mm) always move both heads the same distance in opposing directions ensure the locking screws are fastened on the flat milled areas on the shaft.

Problems and solutions

Prior to working on the machine switch the main electrical switch to the 0 position and lock it. Failure to comply may result in serious personal injury or death.

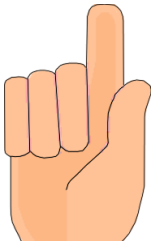
.

Problem	Solution
The smaller and shorter types of fish have a tendency to jump forward very abruptly after passing through or over the descaling heads. this will usually leave scales or damage the fish.	Apply more spring pressure on the pressure plates before and immediately after each descaling head. Adjustable pressure plates, by the descaling heads, might need adjustment
Scales remain on the fish.	Turn down the processing speed of the machine with the frequency adjusting button. Find the appropriate working speed. Increase pressure on the pressure plates by moving the springs.
Scales remain on the back and or the belly.	Move the 30°/45° descalers closer or further apart from each other depending on the size and shape of the fish.
Scales remain on the back, belly, or tail.	Increase spring pressure directly to the pressure plate over the descaling heads.
Processing delicate fish.	Increase the transfer rate using the speed control.
Processing difficult to descale fish.	Decrease the transfer rate using the speed control.
Machine vibrating excessively.	Check if any of the shafts have been bent, pay particular attention to the high speed shafts. Check for screws that may have loosened. Check the bearings of the high speed shafts

Grease Lubrication

**The machine has been lubricated with BAADER ¨Special grease GLS 380/N3¨.
This grease is of the GRAS type, semi-synthetic and highly seawater resistant. It complies with the German Food and Consumer Goods Acts (LMBG § 5, art. 1, clause 1) and is authorized according to USDA H1. We recommend using this lubricant at all times.
When using other GRAS lubricants, the trouble free functioning of the machine cannot be guaranteed.**

Ensure only grease free from contaminants is used.



Do not blend with mineral lubricants.

Note that mineral lubricants do not comply with the provisions of Food and Consumer Goods Acts and may thus not be used.

**The complete lubrication system (jerk fitting, mouth of grease gun, hand lever press and the coupling) should be free of any impurities!
The maximum lubricant pressure at the mouth of the grease gun should not exceed 190 bar.**

Whenever cleaned, the machine is to be lubricated to expel any cleaning fluids that may have penetrated the machine bearings.

Country related list of cleaning Agents and Disinfectants

Country	Product					
	P3-topax 12	P3-topax 17	P3-topax 56	P3-topax 68	P3-topax 99	P3-topax 91
Brazil	Quorum Pink II	Quorum Pink II	Quorum Purple	Quorum Amber	Quorum Clear	Ster-Bac
Canada	Quorum Pink II	Quorum Pink II	Quorum Purple	Quorum Amber	Quorum Clear	Ster-Bac
France	P3-topax 12	P3-topax C 80	P3-topax M acid	P3-topax M55	P3-sterylmouss	P3-triquart
Germany	P3-topax 12	P3-clint RI	P3-topax 56	P3-zinnfest flüssig	P3-topax 99	P3-topax 91
Greece	P3-topax 12	P3-topax 17	P3-topax 56	P3-topax 68	P3-topax 99	P3-topax 91
Italy	P3-topax 12	P3-topax 17	P3-topax L54	P3-topax 68	P3-topax SAN	P3-topax 91
Japan	P3-topax 12		P3-topax 56	P3-topax 68	P3-topax 99	P3-triquart
Namibia	Quorum Pink II	Quorum Pink II	Quorum Purple	Quorum Amber	Quorum Clear	Ster-Bac
Netherlands	P3-topax 12	P3-topax 17	P3-topax 56	P3-topax 68	P3-topax 99	P3-triquart
Norway	TP 12	TP 17	TP 56	TP 68	TP 99	Triquart AP
Poland	P3-topax 12	P3-topax 17	P3-topax 56	P3-topax 68	P3-topax 99	P3-topax 91
Russia	P3-topax 12	P3-clint RI	P3-topax 56	P3-zinnfest flüssig	P3-topax 99	P3-topax 91
South Africa	Quorum Pink II	Quorum Pink II	Quorum Purple	Quorum Amber	Quorum Clear	Ster-Bac
Spain	P3-topax 12	P3-topax 17	P3-topax 56	P3-topax 68	P3-topax 99	P3-topax 91
United Kingdom	P3-FBC foam	P3-rik	P3-topax 56	P3-topax 68		P3-triquart
Ukraine	P3-topax 12	P3-clint RI	P3-topax 56	P3-zinnfest flüssig	P3-topax 99	P3-topax 91

USA	**Quorum Pink II**	**Quorum Pink II**	**Quorum Purple**	**Quorum Amber**	**Quorum Clear**	**Ster-Bac**

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Lubrication and Preservative Recommendation

The mineral oil companies listed maintain Technical Services whose engineers will always be available to our customers to give technical advice in lubricating matters.

Lubricant					
Soap Base					
Code	**Din 51502**				
	ISO 3498				
	Viscosity				
Company					
Aral					
BP					
Castrol					
Chevron					
Esso					
Fina					
Kluber					
Mobil					
Shell					
Texaco					
Tribol ICI Molub-Alloy					

Special lubricants and preservatives	**Baader Lubrication Grease**			**Baader Special spray**	**Baader Preservation Spray**	**Baader Preservation Liquid**
	GLS 380/N3 [1)]			**FLC 65** [2)]	**MBF 370** [2)]	**MBF 360** [2)]
Part No.	**51.50.0103**	**51.50.0102**	**51.50.0109**	**51.10.0186**	**51.10.0201**	**51.10.0200**
Available sizes	**400 g Cartridge**	**25 kg Hobbock**	**50 kg Hobbock**	**400 ml Can**	**400 ml Can**	**5 l Receptacle**

authorised by USDA-H1. The lubricant is of the GRAS type.
comply with the USDA-H1 requirements and is of the GRAS type, semi-synthetic and extremely seawater resistant.